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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,395	11/20/2003	Craig A. Bianchini	CIN-100US1	9752
23122	7590	02/17/2006	EXAMINER	
RATNERPRESTIA			HUG, ERIC J	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	

1731

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/718,395	<b>Applicant(s)</b> BIANCHINI, CRAIG A.	
	<b>Examiner</b> Eric Hug	<b>Art Unit</b> 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 18 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 and 24 is/are allowed.
- 6) ☒ Claim(s) 21-23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

In view of the Appeal Brief filed on December 15, 2005, the rejection of claims 21, 23, 25 and 27 under 35 U.S.C. 103(a) over Samuelson (US 3,843,473) in view of Thorsell et al. (US 4,670,098) has been withdrawn, the rejection of claims 22 and 26 under 35 U.S.C.103(a) over Samuelson in view of Davies et al. (US 5,127,992) and Thorsell has been withdrawn, and the rejection of claims 18 and 24 under 35 U.S.C. 103(a) over Samuelson in view of Thorsell and Elton (US 4,806,203) has been withdrawn.

Prosecution is hereby reopened.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samuelson et al (US 3,843,473).

Samuelson discloses a method in which cellulose pulp obtained by the digestion of wood is treated with a waste alkaline oxygen gas bleaching liquor in order to displace the pulping chemicals (i.e., black liquor) from the pulp. The bleaching liquor contains organic substances. With regards to the claims, Samuelson also discloses a method of using the same waste bleaching liquor to wash pulp after the alkaline oxygen gas bleaching step (i.e. oxygen delignification step). In this method, the waste bleaching liquor is oxidized or filtered prior to use. See column 12, line 74 to column 13, line 36. Note in column 4, lines 37-50, that the waste liquor can be the alkaline oxygen gas bleaching liquor itself or be a pulp washing fluid that

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includes the alkaline oxygen gas bleaching liquor. If the bleaching liquor is indeed a pulp washing fluid, it would be obvious to one skilled in the art that this bleaching liquor has been separated from the pulp at some point before or after the oxygen delignification step, depending on where the washing fluid is obtained. After the organics have been removed from the bleaching liquor, the liquor is used to wash pulp downstream of the oxygen delignification.

Claims 21, 22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henricson (US 6,733,625) in view of Modell et al (US 5,470,481) and Samuelson. Henricson qualifies as prior art under 35 U.S.C. 102(e).

Henricson discloses treating a brown stock washing fluid obtained as a filtrate in a multi-stage washing process arranged after digestion and before oxygen delignification, and using the treated fluid in a previous washing stage or as dilution water. An oxidizing chemical is added to the washing fluid thereby oxidizing high molecular organic materials in the filtrate. This reduces chemical demand in processes subsequent the brown stock washing process.

Henricson provides no disclosure of filtering the washing fluids. However, Modell discloses a method of recovering wash waters from pulp mill and paper mill effluents by subjecting the wash waters to ultrafiltration and reverse osmosis separation of organic materials from the wash waters. Samuelson (described above) is cited here to exemplify that oxidation or filtering of wash waters are known alternative means of removing organic materials from washing fluids. Therefore, at the time of the invention, it would have been obvious to one skilled in the art to use filtration on the brown stock wash fluids of Henricson as an alternative to obtain a wash fluid with reduced amount of high molecular weight organics.

***Allowable Subject Matter***

Claims 18 and 24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose or suggest a wood pulping process wherein hot black liquor is displaced from a batch digester using pulp washing fluid which has been filtered to remove high molecular weight organic by-products.

***Response to Arguments***

Applicant's arguments filed with the Appeal Brief on December 15, 2005 have been fully considered.

Arguments regarding the combination of references to arrive at the claimed invention are persuasive. With respect to claim 23, a new rejection based on Samuelson is presented above. With respect to claim 18, it is recognized that the references do not suggest displacing hot black liquor in a digester with filtered pulp washing fluid. Although Thorson teaches filtering, it is with respect to the recycled digestion fluid itself, not a pulp washing fluid. With respect to claim 21, there is no teaching of using the treated bleaching fluid of Samuelson in pulp dilution. With respect to claim 22, there is no teaching of using filtered washing fluid in a multi-stage washing process as claimed.

Further regarding Samuelson, Applicant argues that Samuelson does not teach the removal of high molecular weight organic products. However, Samuelson repeatedly discloses

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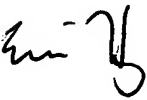
that the waste alkaline oxygen gas liquor contains organics such as lignin (high molecular weight), and in column 13 discusses means for removing them. Applicant also argues that the wood pulping process in Samuelson is for a bleach plant and not for a brownstock fiberline which includes a digester and brownstock washer. In this respect, Applicant also argues that the alkaline oxygen gas bleaching is not oxygen delignification in the true sense in connection with a digester. The examiner disagrees with this. It is clear that the process of Samuelson is in connection with a digester and also with a multi-stage washing process (column 4, lines 64-72). It is also evident not only from Samuelson but also from the patents cited therein that the so-called "alkaline oxygen gas bleaching" is equivalently oxygen delignification, which is performed to reduce the amount of chemicals needed in subsequent bleaching steps that use well known bleaching agents such as chlorine, chlorine dioxide, ozone, peroxide.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
jeh

*Approved,*  
  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700